

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

With Michael J. DeHaemer (Reg. No. 39,164) on 01/15/2010.

The application has been amended as follows:

In the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Previously Presented) A method for processing command information in a command processing system, the method comprising:

(a) detecting a real time event while monitoring a plurality of event signals, wherein the plurality of event signals are generated by a plurality of engines and one of the plurality of engines is a 3D engine:

(b) causing commands in a real time event command buffer to be fetched and consumed in response to the real time event; and

wherein step (a) further comprises:

- (a1) providing event selector signal to a comparator;
- (a2) providing the plurality of event signals to the comparator; and
- (a3) generating an event detection signal when at least one of the event signals is equivalent to the event selector signal.

2. (Cancelled)

3. (Previously Presented) The method of claim 1 wherein step (b) further comprises providing the commands in the real time event command buffer to be processed by a command processor.

4. (Original) The method of claim 1 wherein the real time event includes a system command from a system command buffer processed by a command processor, the method further comprising:

- (c) first consuming all of the commands within the real time event command buffer; and
- (d) in response to processing all of the commands of the real time event command buffer, processing a next system command within the system command buffer.

5. (Original) The method of claim 1 further comprising:

- (c) detecting a second real time event; and

(d) causing commands in a second real time command buffer to be fetched and consumed in response to detecting the second real time event.

6. (Currently Amended) A method for processing command information, the method comprising:

(a) providing system commands to a command processor from a system command buffer;

(b) detecting a real time event while monitoring a plurality of event signals, wherein the plurality of event signals are generated by a plurality of engines and one of the plurality of engines is a 3D engine;

(c) fetching real time event commands in a real time event command buffer in response to the real time event;

(d) providing the real time event commands in the real time event command buffer to the command processor; and

(e) consuming the real time event commands by the command processor; and

wherein step (b) further comprises:

(b1) providing an event selector signal to a comparator;

(b2) providing the plurality of event signals to the comparator; and

(b3) generating an event detection signal when at least one of the event signals is equivalent to the event selector signal.

7. (Cancelled)

8. (Previously Presented) The method of claim 6 further comprising:

- (a1) fetching the system commands from the system command buffer;
- (b4) in response to detecting a real time event, pausing the fetching of the system commands; and
- (c1) upon the processing of all the real time event commands in the real time event command buffer, resuming the fetching of system commands from the system command buffer.

9. (Original) The method of claim 6 further comprising:

- (f) detecting a second real time event;
- (g) fetch commands in a second real time event command buffer;
- (h) providing the commands of the second real time event command buffer to the system processor; and
- (i) consuming the second real time event commands by the system processor.

10. (Currently Amended) A method for processing command information, the method comprising:

- (a) loading real time event into a real time event detector;
- (b) providing a system command from a system command buffer to a command processor;

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(c) detecting a real time event while monitoring a plurality of event signals, wherein the plurality of event signals are generated by a plurality of engines and one of the plurality of engines is a 3D engine;

(d) fetching real time event commands in the real time event command buffer:

(e) providing the real time event commands of the real time event command buffer to the ~~system~~ command processor; and

(f) consuming the real time event commands by the ~~system~~ command processor; and

wherein the step(c) further comprises:

(c1) providing an event selector signal to a comparator;

(c2) providing the plurality of event signals to the comparator; and

(c3) generating an event detection signal when an event signal is equivalent to the event selector signal.

11. (Cancelled)

12. (Original) The method of claim 10 further comprising:

(g) loading a second real time event into the real time event detector.

13. (Currently Amended) An apparatus for processing command information, the apparatus comprising:

a command processor for processing system commands from a system command buffer;

a first real time event engine which monitors a plurality of event signals for a real time event; [[and]]

a real time event command buffer, containing a plurality of real time event commands, operably coupled to the first real time event engine; and

a plurality of engines providing the plurality of event signals, wherein one of the engines is a 3D engine;

wherein when the real time event occurs, the real time event commands are fetched and consumed by the command processor;

wherein the first real time event engine comprises a real time event detector comprising an event table containing an event selector; a comparator operative to receive the event selector;

wherein the plurality of engines provide the plurality of event signals to the comparator; and

wherein the comparator compares the plurality of event signals to the event selector and produces an event detection signal when at least one of the plurality of event signals matches the event selector.

14. (Cancelled)

15. (Previously Presented) The apparatus of claim 13 wherein the event table further contains a command buffer pointer and a length of command buffer field wherein the command buffer pointer points to a command buffer and the length of command buffer field provides the number of commands within the command buffer.

16. (Cancelled)

17. (Original) The apparatus of claim 13 wherein the event table is stored in a local command processor memory.

18. (Previously Presented) The apparatus of claim 13 further comprising a real time event controller which programs the real time event detector with the real time event selector for the detection of the real time event.

19. (Previously Presented) The apparatus of claim 13 further comprising:

a second real time event engine which monitors the commands provided to the command processor for a second real time event; and

a second real time event command buffer, containing a plurality of second real time event commands, operably coupled to the second real time event engine, wherein when the second real time event occurs, the second real time commands are fetched and consumed by the command processor.

20. (Currently Amended) An apparatus for processing command information, the apparatus comprising:

a command processor for processing system commands from a system command buffer;

a first real time event engine which monitors a plurality of event signals for a first real time event;

a plurality of engines providing the plurality of event signals, wherein one of the plurality of engines is a 3D engine;

a first real time event command buffer, containing a plurality of first real time event commands, operably coupled to the first real time event engine, wherein when the first real time event occurs, the processing of the system commands is paused and the first real time event commands are fetched and consumed by the command processor;

a second real time event engine which monitors the plurality of event signals for a second real time event; and

a second real time event command buffer, containing a plurality of second real time event commands, operably coupled to the second real time event engine, where in when the second real time event occurs, the processing of commands by the command processor is paused and the second real time event commands are fetched and consumed by the command processor;

wherein the first real time event engine comprises a first real time event detector having a first event selector and a first comparator which receives the first event selector;

wherein the second real time event engine comprises a second real time event detector having a second event selector and a second comparator which receives the second event selector; and

wherein the plurality of engines is operably coupled to the first comparator and the second comparator, whereupon when one of the event signals matches the first event selector, a first event detection signal is produced by the first comparator and when one of the event signals matches the second event selector, a second event detection signal is produced by the second comparator.

21.-22. (Cancelled)

23. (Previously Presented) A graphics controller comprising:

a command processor for processing system commands from a system command buffer;

a first real time event engine which monitors a plurality of event signals for a first real time event;

a plurality of engines providing the plurality of event signals, wherein one of the plurality of engines is a 3D engine; and

a first real time event command buffer, containing a plurality of first real time event commands, operably coupled to the first real time event engine, wherein when the first real time event occurs, the processing of the system commands is paused and the first real time event commands are fetched and consumed by the command processor;

wherein the first real time event engine comprises a real time event detector comprising an event table containing an event selector; a comparator operative to receive the event selector;

wherein the plurality of engines provide the plurality of event signals to the comparator; and

wherein the comparator compares the plurality of event signals to the event selector and produces an event detection signal when at least one of the plurality of event signals matches the event selector.

24. (Original) The graphics controller of claim 23 further comprising:

a second real time event engine which monitors the plurality of event signals for a second real time event;

a second real time event command buffer, containing a plurality of second real time event commands, operably coupled to the second real time event engine, wherein when the second real time event occurs, the processing of commands by the command processor is paused and the second real time event commands are fetched and consumed by the command processor.

25. (Original) The graphics controller of claim 24 wherein the second real time event of the second real time event engine is programmed by the first real time event engine.

26. (Currently Amended) An apparatus for processing command information, the apparatus comprising:

means for processing system commands from a system command buffer; first

means for monitoring a plurality of event signals for a first real time event;

a plurality of means for providing the plurality of event signals, wherein one of the plurality of means is a 3D engine;

a first means for containing a plurality of first real time event commands, operably coupled to the first means to monitoring, wherein when the first real time event occurs, the processing of the commands by the means for processing system commands is paused and the first real time event commands are fetched and consumed by the means for processing system commands;

a second means for monitoring the plurality of event signals for a second real time event; and

a second means for containing a plurality of second real time event commands, operably coupled to the second means for monitoring, wherein when the second real time event occurs, the processing of commands by the means for processing system commands is paused and the second real time event commands are fetched and consumed by the means for processing system command;

wherein the first monitoring means comprises a means having a first event selector and a first means for receiving the first event selector;

wherein the second monitoring means comprises a means having a second event selector and a second means for receiving the second event selector; and

wherein the plurality means are operably coupled to the first means for receiving and the second means for receiving, whereupon when one of the event signals matches the first event selector, a first event detection signal is produced by the first means for receiving and when one of the event signals matches the second event selector, a second event detection signal is produced by the second means for receiving.

27. (Cancelled)

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HYUNG S. SOUGH can be reached at (571) 272-6799.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/VAN H NGUYEN/

Primary Examiner, Art Unit 2194